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CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

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8 June 1973

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Increasing the Combat Effectiveness of Front Rocket Troops

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought." This article proposes new launch readiness terms and time periods for tactical rocket units. Three rockets which have not been identified previously are cited in readiness tables. Limitations on the operating time of gyroscopes in guidance systems are discussed. This article appeared in Issue No. 1 (89) for 1970.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.

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Deputy Director for Operations

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Intelligence Information Special Report

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COUNTRY USSR

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DATE OF INFO. Early 1970

DATE 8 June 1973

SUBJECT

MILITARY THOUGHT (USSR): Increasing the Effectiveness of the Initial Nuclear Strike of a Front During an Offensive Operation

SOURCE Documentary

SUMMARY

The following report is a translation from Russian of an article which appeared in Issue No. 1 (89) for 1970 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought." The authors of this article are General-Mayor A. Romashkin (Candidate of Military Sciences), Colonel V. Ivanov (Candidate of Military Sciences), Colonel A. Zubulin, and Lieutenant Colonel A. Mironenko. They propose establishment of new readiness conditions for ground forces rocket units, with tables of specific time limits for transition from various states of readiness to the launch phase. Three missiles in the 9KDD series are identified. The authors caution against maintaining rocket units on alert for extended periods, particularly because of the expenditure of gyroscope operating time in guidance systems.

END OF SUMMARY
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COMMENT:

General-Mayor A. A. Romashkin was identified in Krasnaya Zvezda in 1967 as a candidate of military sciences and lecturer at the Kazan Higher Command Engineering School. There is no information in available reference materials which can be firmly associated with the other authors. Military Thought has been published by the USSR Ministry of Defense in three versions in the past--TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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Increasing the Effectiveness of the Initial Nuclear Strike of a Front During an Offensive Operation

by General-Mayor A. Romashkin, Candidate of Military Sciences
Colonel V. Ivanov, Candidate of Military Sciences
Colonel A. Zubulin
Lieutenant Colonel A. Mironenko

The success of an offensive operation by formations of ground troops will be determined above all by the effectiveness of the initial nuclear strike of their rocket troops aimed at gaining immediate superiority over the enemy from the very first minute of the transition to nuclear operations.

The present article will consider several ways of increasing the effectiveness and shortening the duration of an initial nuclear strike by rocket troops of a front during an offensive operation. These include in particular: uninterrupted maintenance of high combat readiness of rocket troops for a nuclear strike and for rapid transition to the condition of highest readiness; raising the efficiency of the control of rocket troops; and increasing the operating reliability of gyroscopes of missile guidance systems.

The effectiveness of the initial nuclear strike depends to a significant degree on the readiness of rocket troops to mount the strike in the shortest possible time after receiving the radio signal ordering them to do so. But this does not mean that the strike readiness of all rocket troops must be the same throughout the whole period of non-nuclear operations. It is obviously most expedient to increase their combat readiness as information is received indicating enemy preparation for the immediate use of nuclear weapons, with the transition of rocket units to a higher degree of readiness taking place as rapidly as possible upon receipt of the appropriate radio signal, which will be broadcast over all communications channels.

At the present time there are concepts defining the combat readiness of rocket troops in peacetime (routine, increased, and full) and also the combat readiness of launch batteries in the preparation of nuclear strikes (No. 3, 2, 2A, and 1). There is presently no concept reflecting a higher degree of combat readiness of rocket troops than "full".

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In order to shorten the time required for increasing the combat readiness of rocket troops preparing for the initial nuclear strike, it is advisable to introduce the following concepts regarding the status of rocket troops of a front during an offensive operation: "alert" and "maximum alert" (see Table 1).

"Alert" is a higher degree of readiness of rocket troops for the first nuclear strike than full readiness, at which rocket troops are placed before the onset of combat operations. If duty subunits are at Readiness No. 2 when in a status of full combat readiness, and the others are at Readiness No. 3, then the duty subunits with assigned targets will go to Readiness No. 2A upon receipt of the radio signal "alert", while the others will go to Readiness No. 2. At the same time, the rocket units will continue to move forward as the troops advance.

"Maximum alert" is the highest degree of combat readiness of rocket troops. Upon receipt of the signal "maximum alert", the duty subunits with assigned targets will go to Readiness No. 1 and the others to Readiness No. 2A. Battalions moved into new site areas will be deployed directly upon arrival in unprepared areas and will be placed at Readiness No. 2A.

We must refine the concept "duty status of a battalion". It is that status in which one or more of the launch batteries are aimed and ready to deliver a strike against a target in the shortest possible time after receiving the established radio signal to do so. A three-battery battalion on combat duty at Readiness No. 1 may be assigned two main targets and one alternate, or only two main targets (in which case one battery will be in reserve); a four-battery battalion may be assigned two or three main targets and one alternate, or only two or three main targets.

The timely transition of rocket troops to a higher degree of combat readiness makes it possible to appreciably shorten the preparation time and the duration of the initial nuclear strike, and it increases the effectiveness of the strike (see Table 2).

The radio signal for transition of rocket troops to a higher degree of combat readiness may be given by decision of

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Table 1

The Transition of Rocket Troops to a Higher Degree of Combat Readiness for the Initial Rocket-Nuclear Strike (Variant)

Degree of combat readiness of rocket troops	Action of rocket subunits on signal to convert to higher degree of combat readiness		
	Rocket subunits located in site areas		Rocket units being relocated into new site areas
	Duty subunits with assigned targets, at readiness:	Others at readiness:	
Full combat readiness....	No. 2	No. 3	Complete the march
Alert.....	No. 2A	No. 2	Complete the march
Maximum alert	No. 1 (No. 2A for TR-1 subunits in air temperatures of -10° C and lower)	No. 2A	Deploy from the march and go to readiness No. 2A

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Table 2

Possible Preparation Time and Duration of the Initial Nuclear Strike at Various Degrees of Combat Readiness of Rocket Troops (Variant)

Degree of combat readiness of rocket troops	Levels of combat readiness of launch batteries and potential time limits for mounting strikes										Number and sequence of strikes from time signal is received				
	9K76					9K72					9K52				
	No. 1, strike in 4 minutes	No. 2A, strike in 20 minutes	No. 2, strike in 30 minutes	No. 3, strike in 39 minutes	Deployment from the march, strike in 54 minutes	No. 1, strike in 4 minutes	No. 2A, strike in 13 minutes	No. 2, strike in 19 minutes	No. 3, strike in 25 minutes	Deployment from the march, strike in 54 minutes	No. 1, strike in 3.5 minutes	No. 2, strike in 15 minutes	No. 3, strike in 20 minutes	Deployment from the march, strike in 32 minutes	In 5 minutes	In 12 to 20 minutes	In 20 to 36 minutes	In 36 to 40 minutes	In reserve
Full combat readiness....	-	+	4	4	4	-	-	10	10	10	+	-	16	8	-	26	14	4	22
Alert.....	-	4	4	-	4	-	10	10	-	10	-	16	-	8	-	40	4	-	22
Maximum alert..	2	8	-	-	-	7	20	+	-	-	24	+	+	+	25	28	-	+	13

Comment:

1. Two front rocket brigades, two army rocket brigades, and six battalions of tactical rockets may be assigned for the initial nuclear strike.
2. In a rocket brigade, one of the battalions will be on duty, one at the main sites in the siting area, and one on the march.
3. When on combat duty, a four-battery battalion will be assigned three targets, and a three-battery battalion will have two targets.

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the commander of troops of the front upon discovery of reliable indications of enemy preparation for the immediate use of nuclear weapons.

Prolonged maintenance of rocket troops on "alert", or especially "maximum alert", status is not advisable and is even dangerous, since it may subsequently lead to an appreciable drop in their combat readiness, to their lagging behind the advancing combined-arms large units, and to a lowering of their capability to strike targets located within the depth of the enemy's operational defenses. The maximum period during which rocket troops can remain in a status of "alert" or "maximum alert" must be determined by experience.

A very important factor in preparing and carrying out the initial nuclear strike during an operation is perfection of the control of rocket troops. The point here is that a nuclear strike plan worked out at the beginning of the offensive operation will gradually become obsolete. It must be constantly refined so that at any given moment a large portion of the launch batteries will have specific targets, with those battalions at the highest degree of combat readiness being directed at the most vital objectives. Increasing the efficiency of troop control will make possible: timely provision of the refined nuclear strike plan to the launch batteries; reduction in the time needed to transmit the signals for mounting the strike; and the transition of rocket troops to a higher degree of combat readiness within a short period of time. Along with increased combat readiness of troops, the possibility of unauthorized rocket launches must be eliminated.

The procedure for refining the objectives of rocket troops in the initial nuclear strike may be as follows. If reconnaissance fails to confirm the existence of a target previously planned for our rocket troops, the commanding officer of the rocket troops and artillery of the front will decide, in agreement with the operations directorate of the front, whether to exclude the target from the plan of the initial nuclear strike and assign another target to the subunit which was to strike it or "draw off" the subunit into the reserves. Concerning newly discovered targets, (once the advisability of including them in the initial nuclear strike has been established), the commanding officer of rocket troops and artillery will report to the commander of troops of the front, who makes the appropriate decision.

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The continuous relocation of troops during an operation necessitates constant redistribution of targets among rocket subunits. Battalions deployed in sites (on combat duty) will receive first category targets, while less vital targets are assigned to those which are in the process of being relocated. In all instances, however, such retargeting must be as uncomplicated as possible and must be carried out with short commands--radio signals.

The length of time rocket subunits spend at Readiness No. 1 may increase if the period of non-nuclear operations becomes longer. There will thus be an increase in the cumulative operating time of gyroscopes in the rocket guidance system; the durability and reliability of these gyroscopes at the present time are not great (the guaranteed operating period set by the manufacturer is twenty-five to thirty hours; in actual practice there have been cases in which they worked for one hundred hours). If we consider that the gyroscopes will be operating an average of twelve hours per day (with two batteries alternating) during combat duty at Readiness No. 1, then in ten days of combat duty they will expend 120 hours of their working life. The probability of faultless performance by the gyroscopes will diminish, decreasing ninety-five percent by the end of the given period and thus increasing the number of unsuccessful launches. If the rockets used in the initial nuclear strike are to maintain a high level of operating reliability, we must provide for the replacement of a certain portion of the gyroscopes during an offensive operation. For this purpose it is necessary to have a reserve of them provided to the mobile repair-technical base or the brigade technical battery.

We have reviewed only part of the questions involved in increasing the effectiveness of the initial nuclear strike by the rocket troops of a front. It is also necessary to continue the search for new and more perfect ways and means for conducting reconnaissance and final reconnaissance of enemy nuclear strike weapons; to train rocket troops in the maintenance of high combat readiness for mounting nuclear strikes under any circumstances; to assure the capability for air mobility when developing launchers, so that rocket battalions can be relocated by air; to develop new and longer-lived gyroscopes and to conducted research for increasing the combat service life of the present gyroscopes and raising it to 400 to 500 hours; to investigate possibilities

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for increasing to twenty-four hours (instead of two hours) the length of time rocket guidance systems can remain at the ready; and to develop and test (through training exercises) a method for replacing gyroscopes in guidance systems at launch (main) sites. In our opinion, these measures will promote further increase in the overall combat effectiveness of the rocket troops as a whole.

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